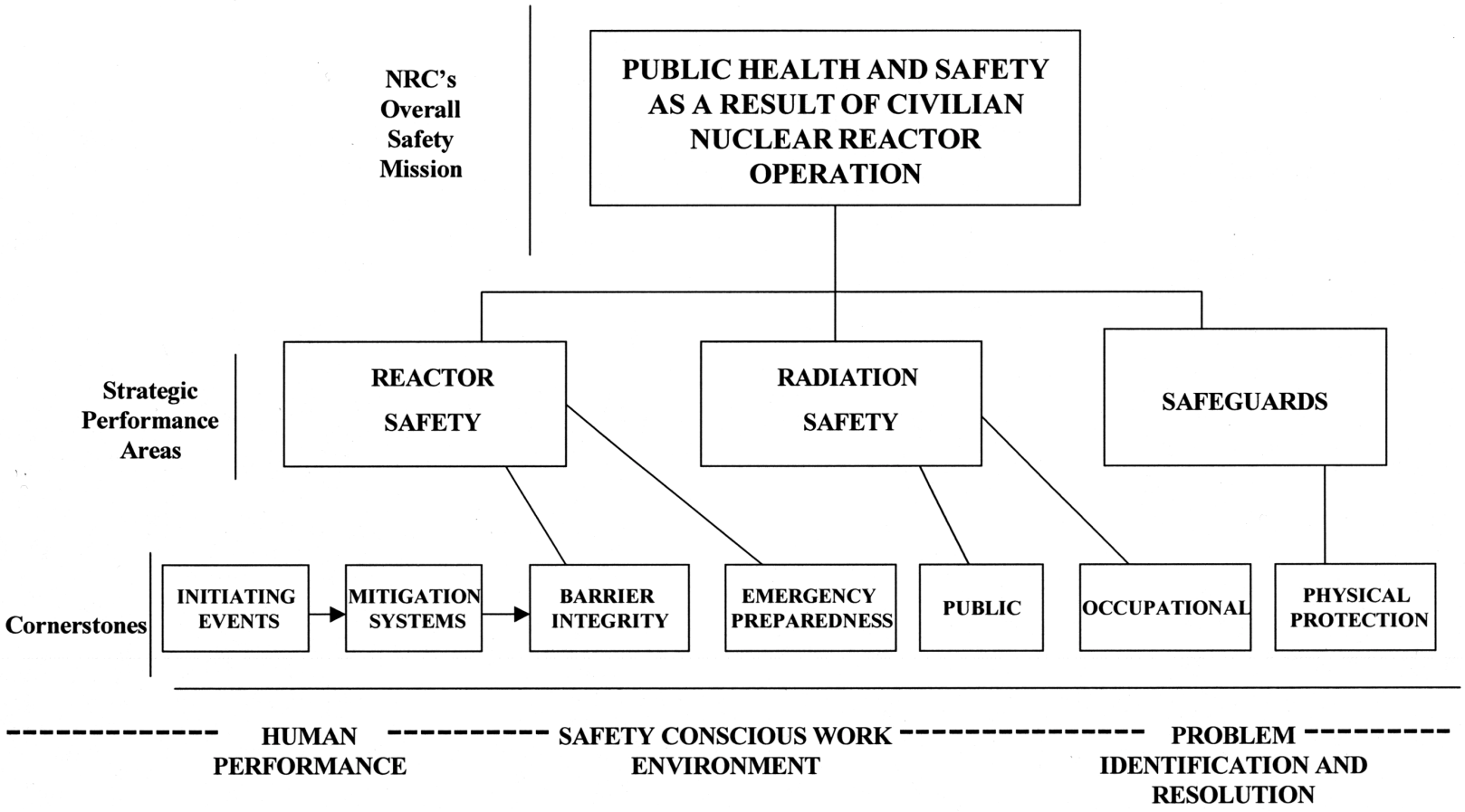
Significance Determination Process Overview

IMC - 0609

REGULATORY FRAMEWORK



SDP Objectives

- To characterize the significance of an inspection issue consistent with the NRC regulatory response thresholds used for performance indicators (P.I.s).

- To provide a framework for discussing and communicating the potential significance of inspection findings.

SDP Objectives (Continued)

- To provide a basis for assessment of licensee performance and enforcement actions associated with an inspection finding.

SDP Definitions

- Observation - A fact; any detail noted during an inspection.

- Significance Determination Process - Characterizes the significance of inspection issues for the purpose of providing one input to the NRC's Reactor Oversight Process.

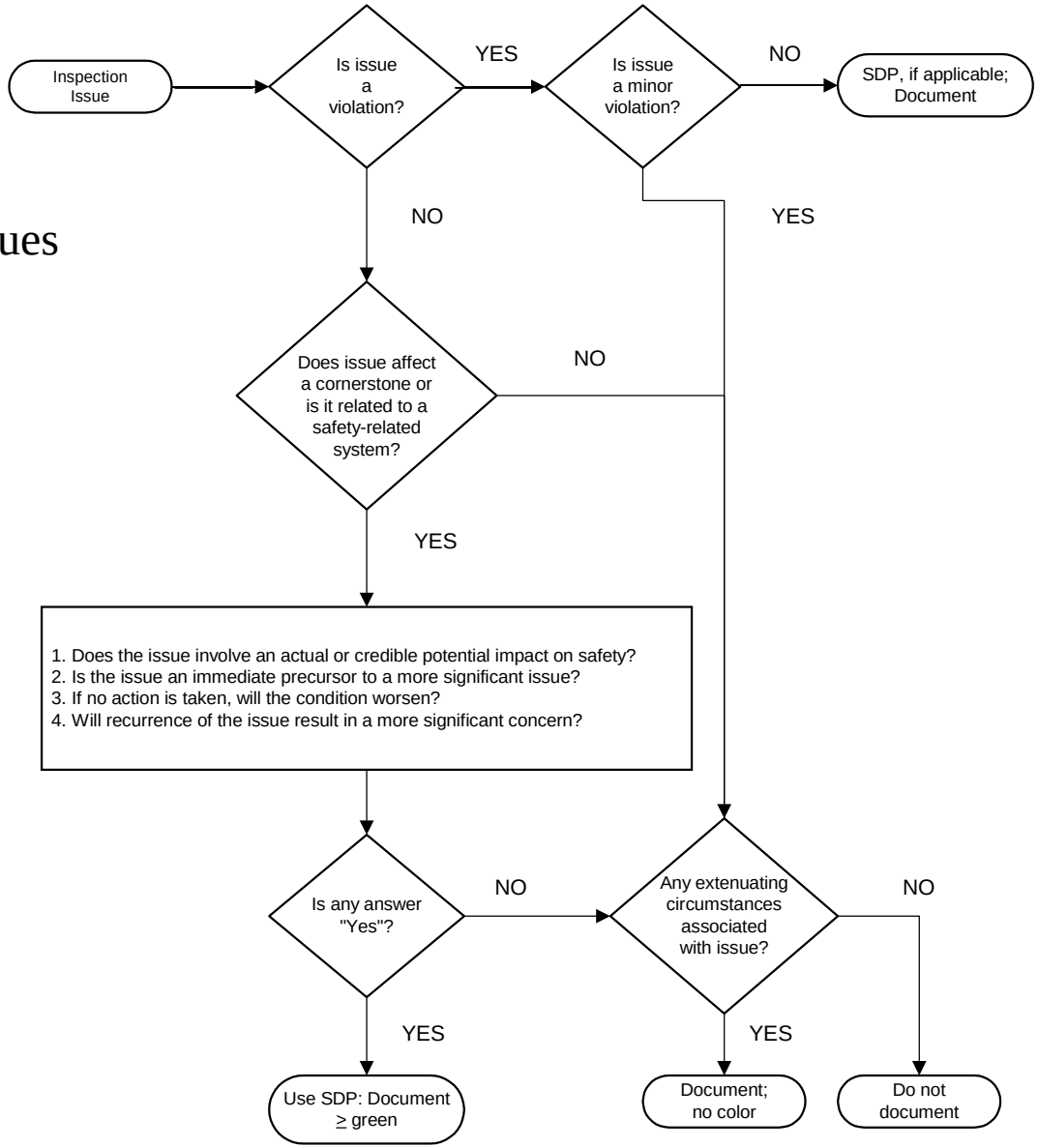
- Finding - Observations that have been placed in context and assessed for significance.

- Apparent Risk Significant Finding - Observation resulting from deficient licensee performance that have been processed through the SDP and whose significance determination is greater than **Green**.

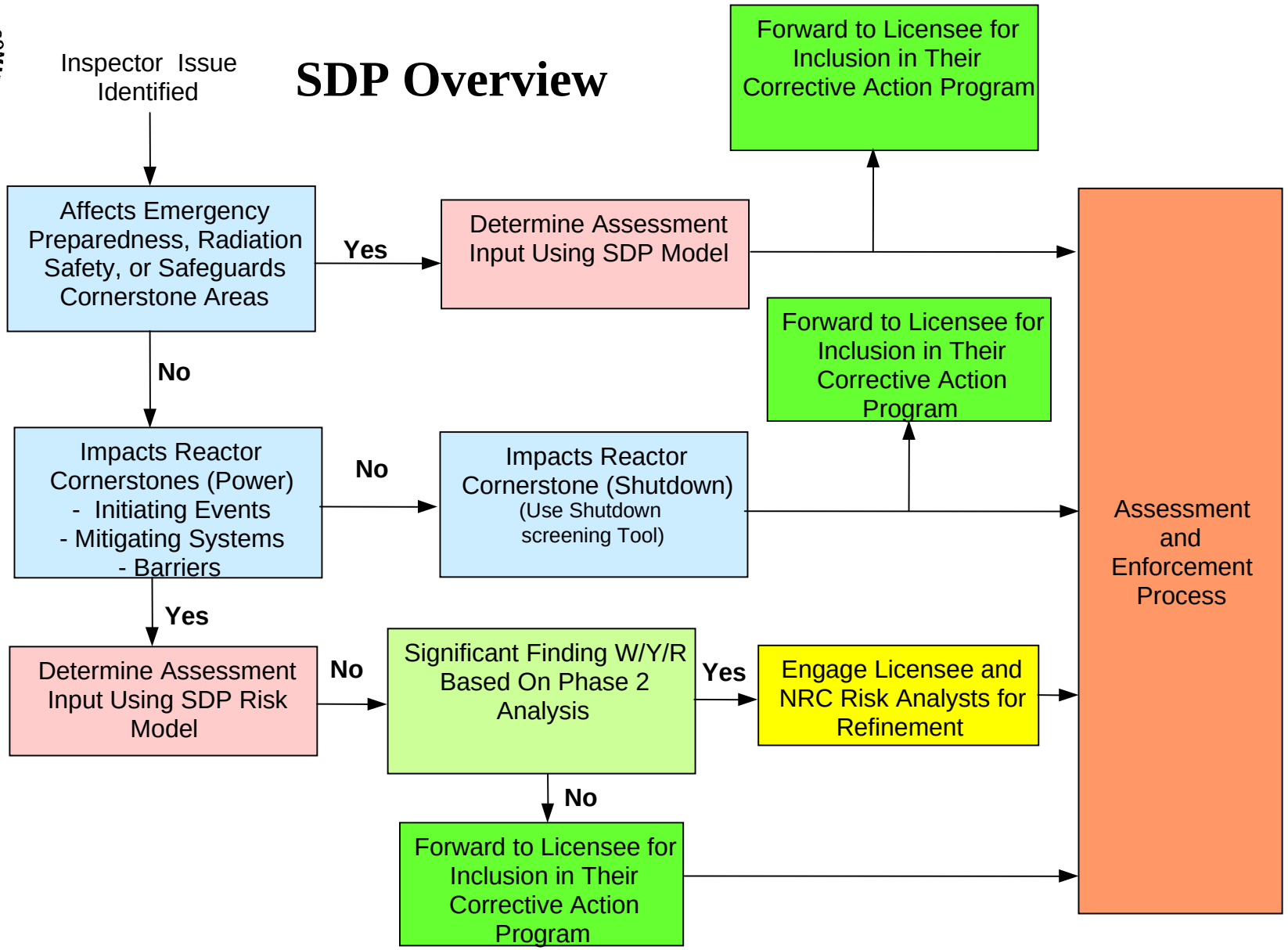
Green Findings

- A Green finding does not mean that the performance issue associated with the finding is good, has no risk, or is even acceptable.
- It may represent non-conformance or a violation.
- However, the safety significance of the finding is low and does not generally warrant further NRC attention.
- A **GREEN** finding is considered to be within the “licensee response band.”
- Licensees are still required to return to compliance with the regulation and their license commitments.

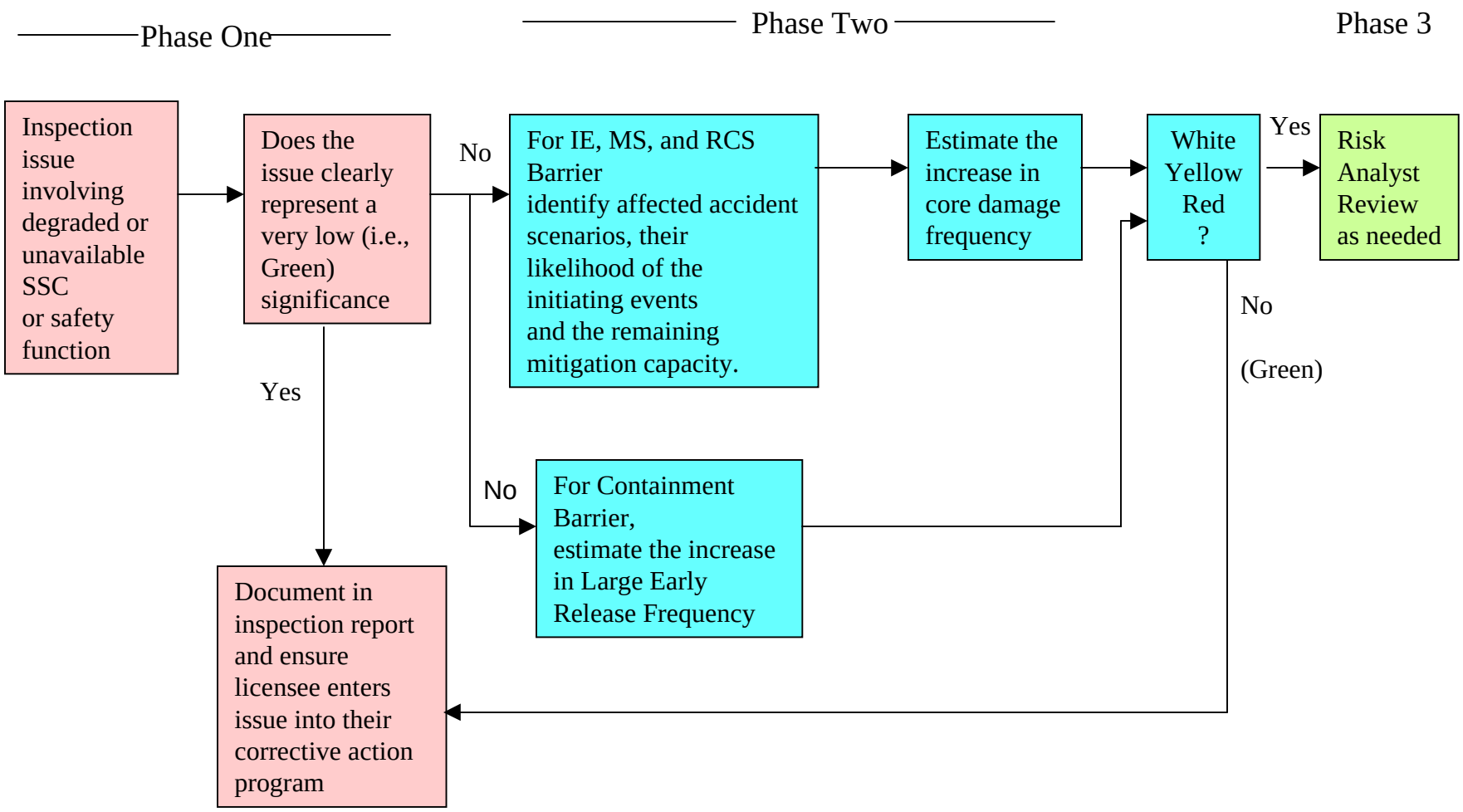
What issues go to the SDP?



SDP Overview



Reactor Safety Significance Determination Process (IE, MS, and Barrier)



Reactor Safety SDP (IE, MS, B) Bases

- Regulatory Guide 1.174, “An Approach for Using Probabilistic Risk Assessment (PRA) in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Bases”

- NUREG/CR-5499, “Rates of Initiating Events at U.S. Nuclear Power Plants: 1987 - 1995”

- NUREG/CR-4674, “Precursors to Potential Severe Core Damage Accidents.”

- Generic equipment unavailability values.

Shutdown SDP

- Screening Process based on NUMARC 91-06.

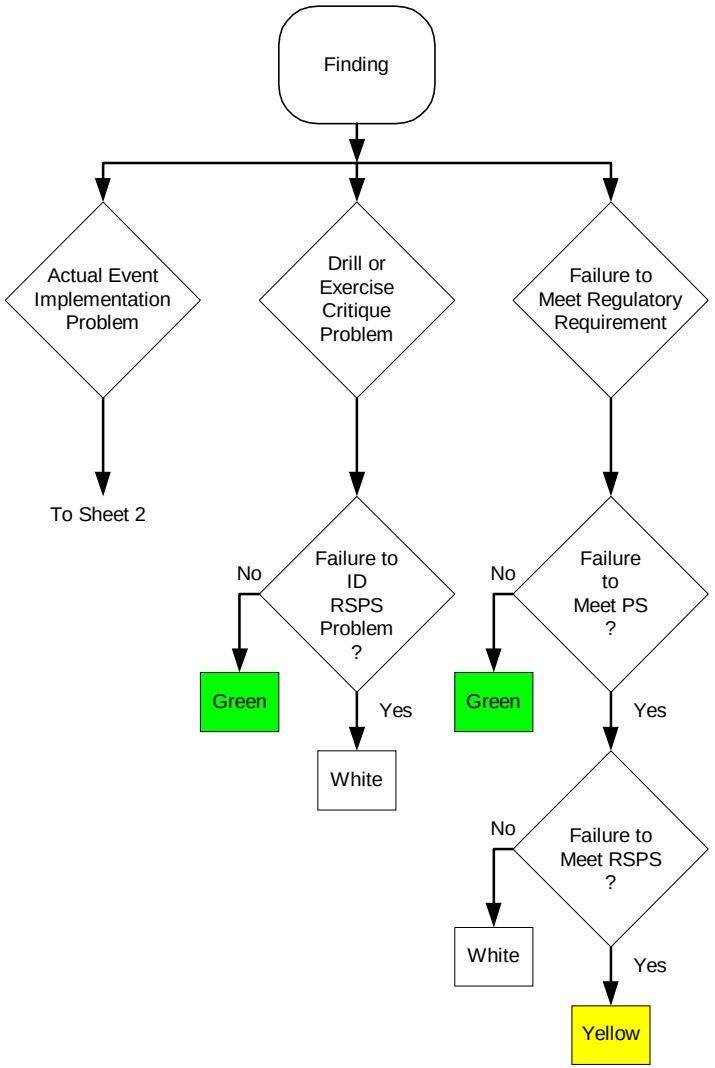
- Screening based on:
  - Core Heat Removal
  - Inventory Control
  - Electrical Power Availability
  - Containment Control (Integrity, Closure, etc.)
  - Reactivity Control

- Items Screening to Phase 2 will require risk analyst input.

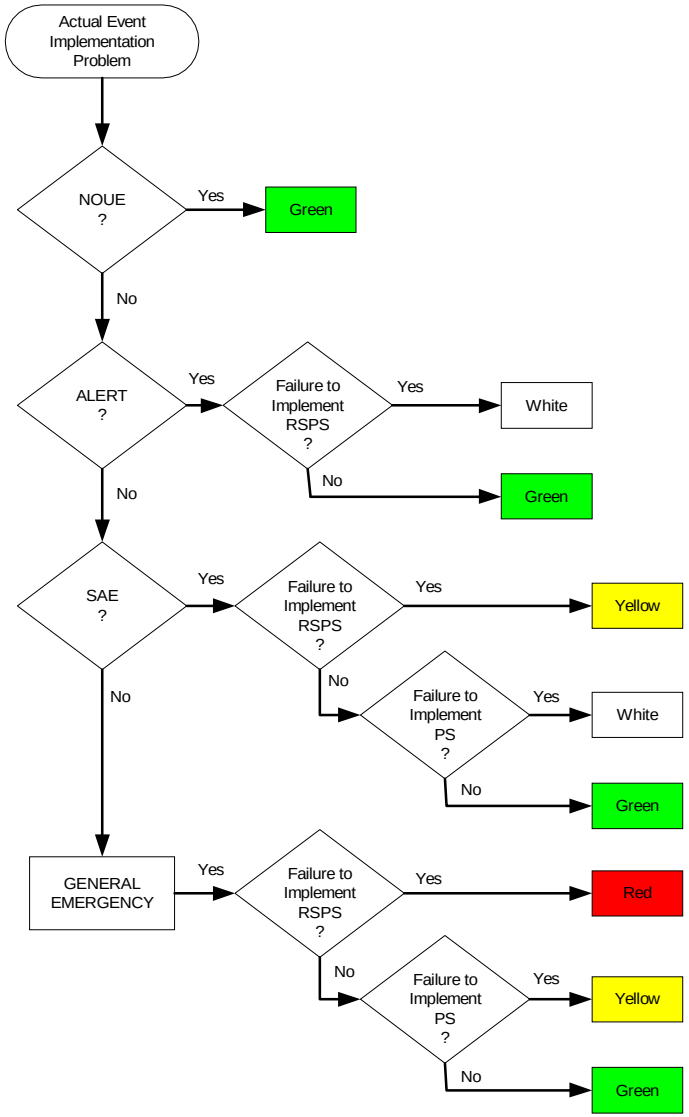
Emergency Preparedness Safety

Significance Determination Process

NRC Significance Determination Process for Emergency Preparedness Inspection Findings



NRC Significance Determination Process for Emergency Preparedness Inspection Findings



Sheet 2

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Occupational Radiation Safety

Significance Determination Process

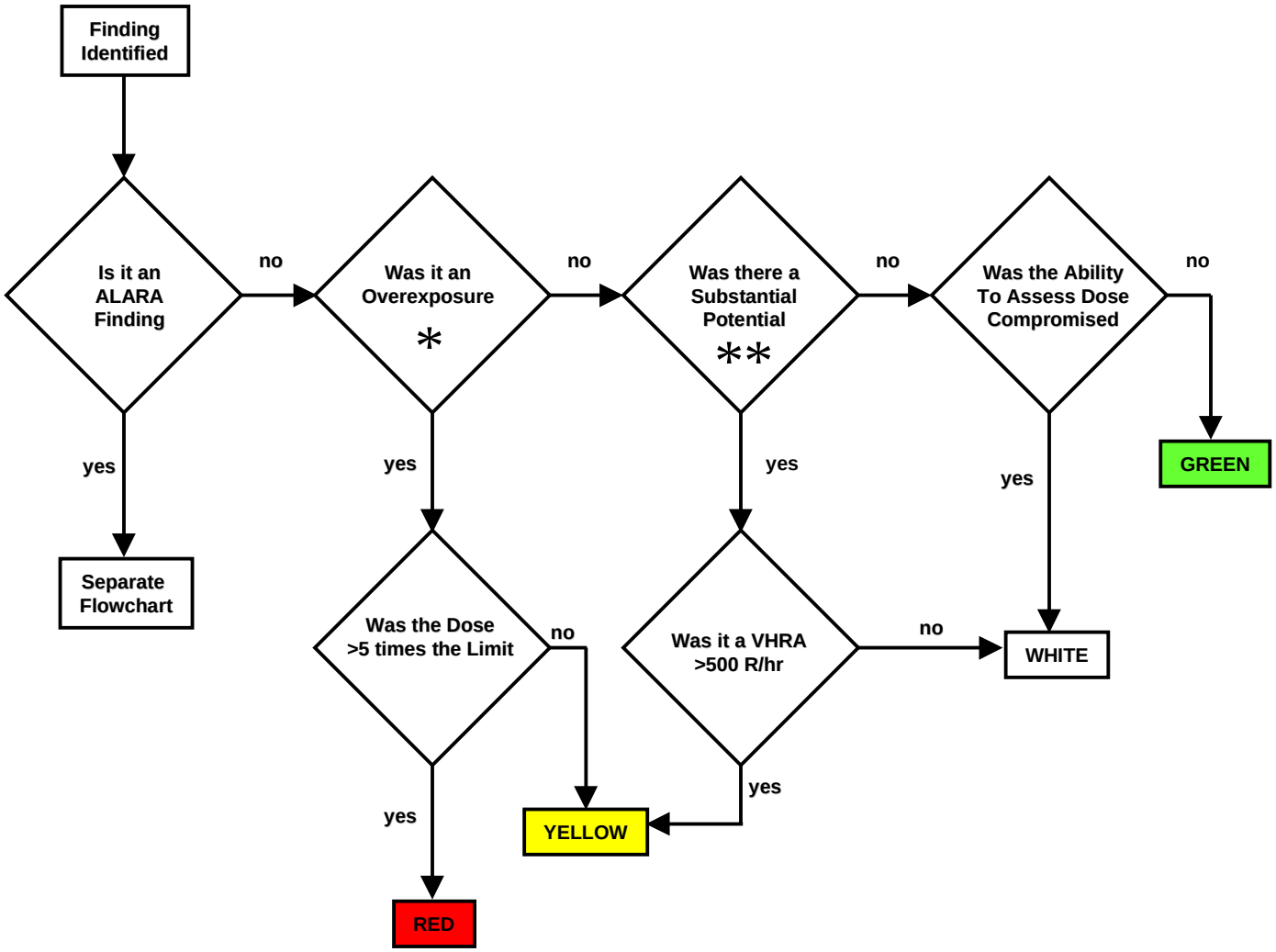
SDP SUMMARY

•A possible Inspection Finding is processed through the SDP flowchart

•The result will be either GREEN WHITE YELLOW or RED depending on the magnitude of the Dose Equalivent exposure, the potential for more serious consequences or the licensee's ability to assess dose

•The Significance of the PI was based solely on the number of occurrences, irrespective of their severity

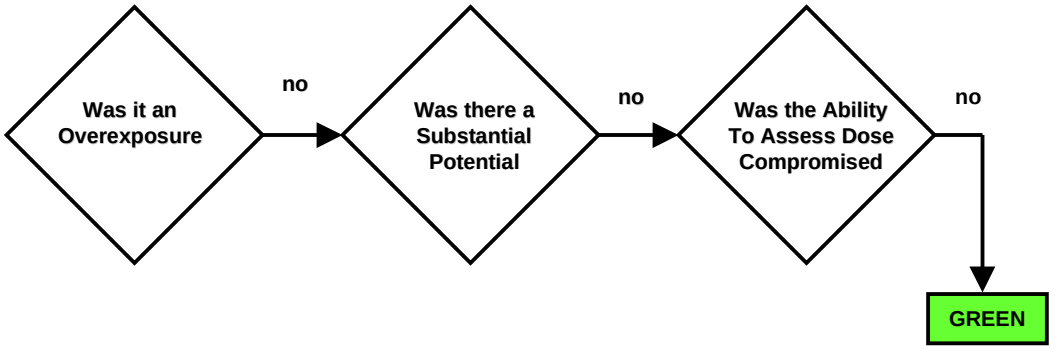
•The SDP evaluates the Significance of Inspection Findings based on the magnitude of actual or potential doses



* **If it is an overexposure attributable to a DRP (Hot Particle) in excess of the OE enforcement discretion (75μCi-hr), then the finding is WHITE.**

** **There is no Substantial Potential for Overexposure (SPO) Finding for a DRP. Such a possibility is outside the scope of the SDP.**

How do we get to a Green Finding?



Not an overexposure

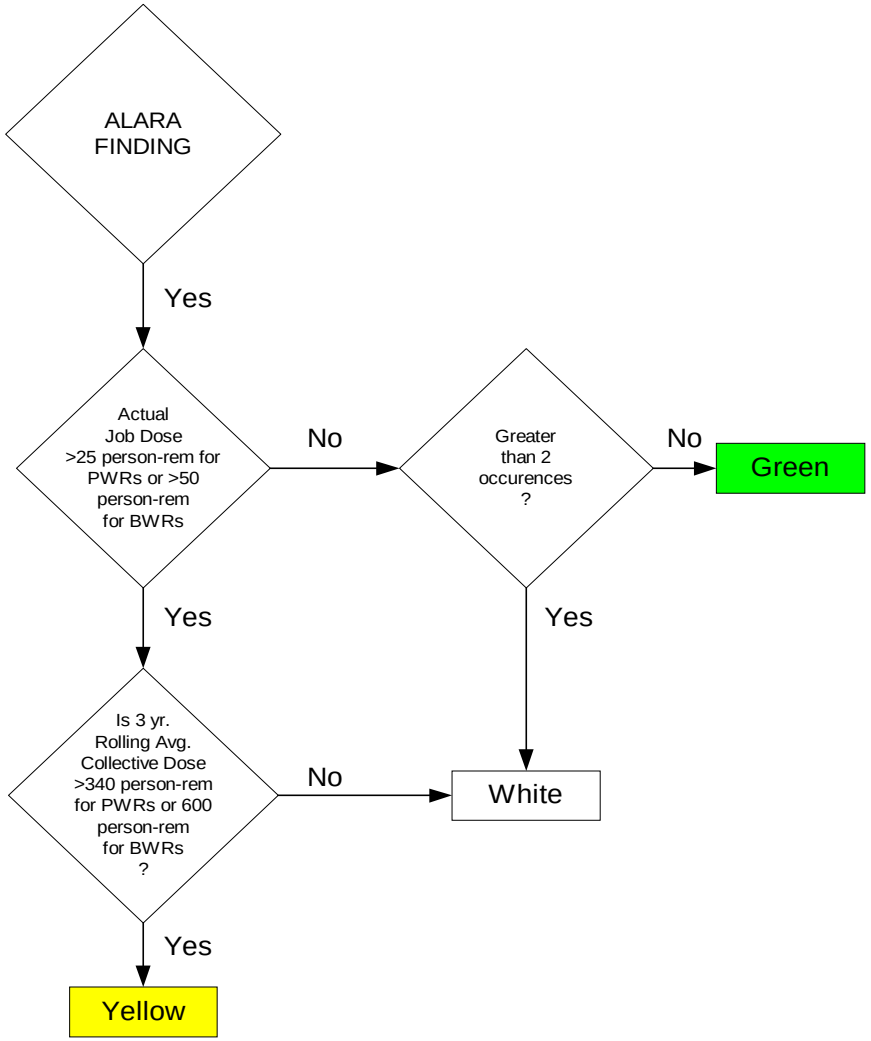
and

Not a substantial potential for one

and

The ability to assess dose is not compromised

Occupational Radiation Safety (ALARA)



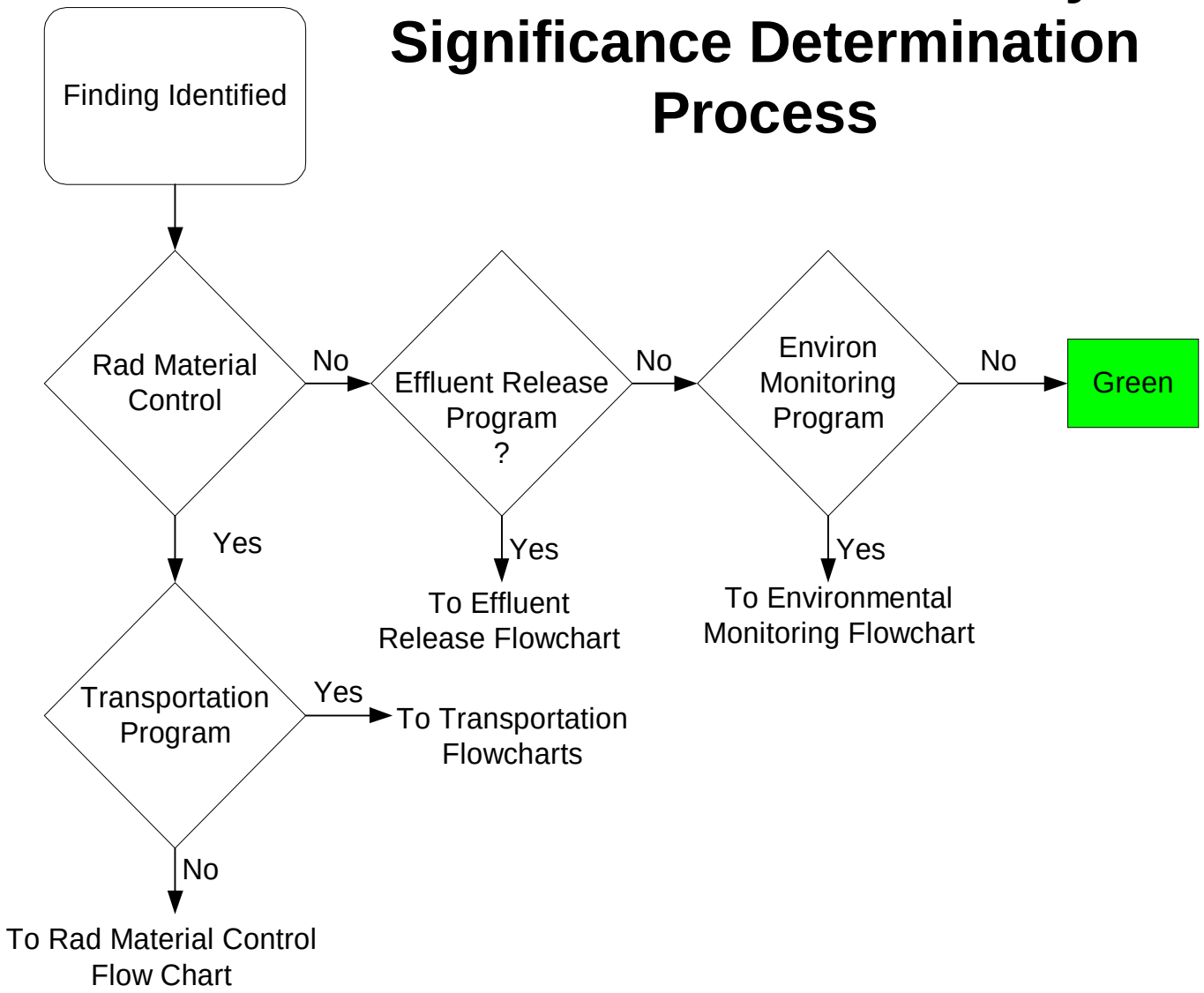
Public Radiation Safety

Significance Determination Process

Public Radiation Safety Significance Determination Process

- This Significance Determination Process is used in conjunction with Inspection Procedure 71122, Public Radiation Safety, to determine the risk significance of an inspection finding.

Public Radiation Safety Significance Determination Process



PUBLIC RADIATION SAFETY

- Radioactive Effluent Release Program
- Radioactive Environmental Monitoring Program
- Radioactive Material Control Program
- Transportation

Radioactive Effluent Release Program

- This branch of the logic diagram focuses on the licensee's radioactive effluent release program. It assesses the licensees ability to control, monitor, and maintain radioactive effluents ALARA

Radioactive Environmental Monitoring Program

- This branch of the logic diagram focuses on the licensee's ability to operate an effective radioactive environmental monitoring program. It assesses the effectiveness of the licensee's program for measuring the levels of radiation and radioactive material in the environs around the plant in order to assess the potential environmental impact.

Radioactive Material Control Program

- This branch of the logic diagram focuses on the licensee's radioactive material control program. It assesses the licensee's ability to prevent the inadvertent release of licensed radioactive material to an unrestricted area.

Transportation

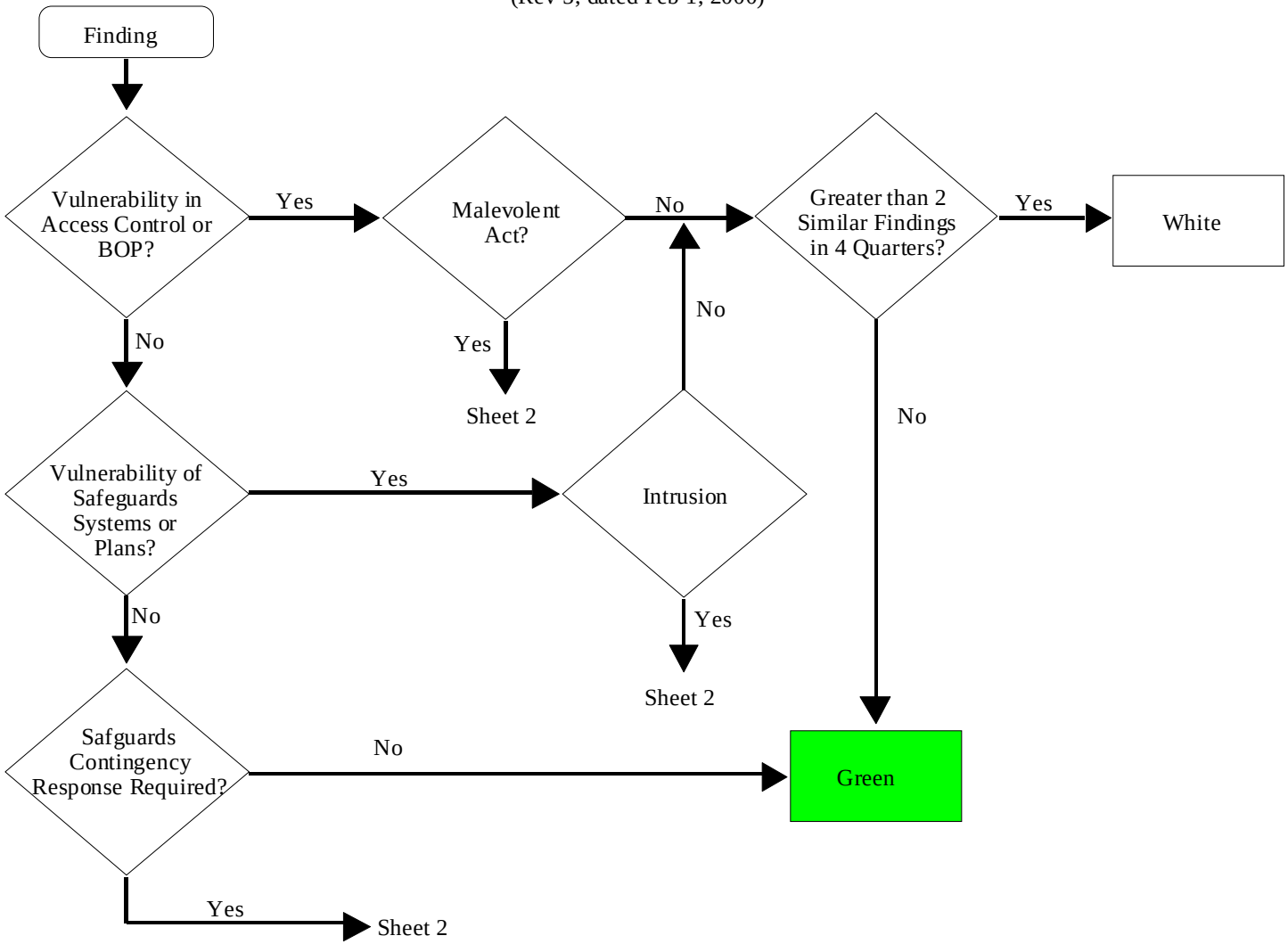
- This branch of the logic diagram focuses on the licensee's radioactive material transportation program. It assesses the licensee's ability to safely transport radioactive material on public roadways.

Physical Protection

Significance Determination Process

Physical Protection (Sheet 1)
Significance Determination Process

(Rev 5, dated Feb 1, 2000)



Physical Protection (Sheet 2)
Significance Determination Process

(Rev5, dated Feb 1, 2000)